

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: November 14, 1996
Date Received: November 7, 1996
Project: Hydro Static Tank, PO #M55192
Date Samples Extracted: November 12, 1996
Date Extracts Analyzed: November 13, 1996

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, ZINC, AND IRON
USING METHOD 6010**

Samples Processed Using Method 3005A
Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>	<u>Iron</u>
M55192	0.07	5.9	9.9	1.6	10
Method Blank	<0.05	<0.05	<0.05	<0.05	<0.5

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QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 73766 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.07	0.07	0	0-20
Copper	mg/L (ppm)	5.9	5.9	0	0-20
Nickel	mg/L (ppm)	9.9	9.9	0	0-20
Zinc	mg/L (ppm)	1.6	1.6	0	0-20
Iron	mg/L (ppm)	10	10	0	0-20

Laboratory Code: 7 3766 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS MSD		Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	0.07	92	91	80-120	1
Copper	mg/L (ppm)	5	5.9	93 b	88 b	80-120	6 b
Nickel	mg/L (ppm)	10	9.9	88 b	84 b	80-120	5 b
Zinc	mg/L (ppm)	5	1.6	86	85	80-120	1
Iron	mg/L (ppm)	10	10	87 b	88 b	80-120	1 b

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS MSD		Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	94	96	80-120	2
Copper	mg/L (ppm)	5	95	97	80-120	2
Nickel	mg/L (ppm)	10	92	92	80-120	0
Zinc	mg/L (ppm)	5	89	88	80-120	1
Iron	mg/L (ppm)	10	96	91	80-120	5



b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

KNJ BI
11-7-96
2:15 PM

Send Report To: Alaskan Copper Works Contact GERALD Thompson
Company _____
Address 628 Aurora St
City, State, Zip Seattle WA 98134
Phone # (206) 382-8375 Date 11-7-56

SITE #	PROJECT NAME	PURCHASE ORDER #
7038	Hydrostatic Tank	M55192
SAMPLE #	S (signature)	PROJECT LOCATION
159	[Signature]	3200 6th Ave S.
REMARKS	SAMPLE DISPOSAL INFORMATION	
	<input type="checkbox"/> Dispose after 30 days <input checked="" type="checkbox"/> Return Samples <input type="checkbox"/> Call for Instructions	

[illegible]

SIGNATURE	PRINT NAME	COMPANY	Date	Time
Relinquished by: 	GERALD Thompson	ACW	11-7-96	12:32
Received by: 	KURT JOHNSON	FB, I	11/7/96	12:32
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Beth M. Albertson, M.S.
Bradley T. Benson
Kelley D. Wilt

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044

November 14, 1996

INVOICE # 96ACU1114-1
DUPLICATE COPY

Accounts Payable
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134

RE: Project Hydro Static Tank, PO #M55192: Results of testing requested by
Gerry Thompson, Project Manager for material submitted on November 7,
1996.

1 water sample analyzed for
Chromium, Copper, Nickel, Zinc, and Iron
using Method 6010 @ \$75 per sample

\$ 75.00

Amount Due

\$ 75.00

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044

November 14, 1996

Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on November 7, 1996 from your Hydro Static Tank, PO #M55192 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Kurt Johnson
Chemist

keh
Enclosures
ACU1114R.DOC